

September 17, 1999

Mr. R. P. Powers  
Senior Vice President  
Nuclear Generation Group  
American Electric Power Company  
500 Circle Drive  
Buchanan, MI 49107-1395

SUBJECT: CASE SPECIFIC CHECKLIST UPDATE FOR RESTART OF DONALD C. COOK  
PLANT

Dear Mr. Powers:

This letter transmits the updated Case Specific Checklist for the Donald C. Cook Nuclear Power Plant which identifies specific issues requiring resolution prior to restart of the Cook Plant. An NRC Manual Chapter 0350 Restart Panel was established in 1998 for the Cook Plant consisting of regional and headquarters personnel. The panel continues to review information related to plant performance and evaluate the effectiveness of your corrective actions to address the Case Specific Checklist items.

Enclosure 1 to this letter contains a revised Case Specific Checklist. The purpose of this revision is to clarify the Case Specific Checklist items addressing systems and containment readiness, programmatic readiness, and functional area readiness for restart.

In addition to these clarifications, the NRC Restart Panel has reviewed the results of your efforts and the NRC inspections conducted to address the following Case Specific Checklist items:

- ! 5A through 5D - Operator Training Issues
- ! 13A - Systems and Containment Problem Discovery
- ! 14A - Programmatic Problem Discovery
- ! 15A - Functional Area Problem Discovery

The NRC Restart Panel has concluded that these Case Specific Checklist items have been adequately addressed to support safe plant restart. Your problem discovery efforts have resulted in the identification of a significant number of action items and plant modifications requiring resolution prior to restart. Among those action items are condition reports addressing several broad deficiencies that are still being evaluated through your corrective action process to determine their impact on plant system safety function. The effectiveness of your corrective action program will be essential to ensure that problems continue to be identified and are effectively resolved. We will continue to monitor the effectiveness of your corrective actions through inspections, coordinated by the NRC Manual Chapter 0350 Restart Panel.

Enclosure 2 includes a summary on the status of implementing NRC Inspection Manual Chapter 0350, "Staff Guidelines for Restart Approval." Enclosure 2 remains unchanged at this time but may also be periodically revised to reflect closure of items and changes to plant

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performance noted by the NRC's Oversight Panel.

If you have questions regarding the NRC actions discussed above, please contact me at 630/829-9700.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document room.

Sincerely,

/s/ J. A. Grobe

John A. Grobe, Director  
Division of Reactor Safety

Docket Nos. 50-315; 50-316  
License Nos. DPR-58; DPR-74

Enclosures: As stated

cc w/encls: A. C. Bakken III, Site Vice President  
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## ENCLOSURE 1

### CASE SPECIFIC CHECKLIST

ITEM NO.	DESCRIPTION	SOURCE DOCUMENTS	STATUS
	<u>PROGRAMMATIC ISSUES</u>		
1	Programmatic Breakdown in Surveillance Testing		
1A	Inadequate instructions in surveillance tests	IR 98004,5,7,9 and 97017	Open
1B	Acceptance criterion lack sufficient margin to analysis limit	IR 98005	Open
1C	Failure to meet technical specification requirements	IR 98005,7 and LER 98015-01	Open
1D	Preconditioning of equipment prior to surveillance testing	IR 98007	Open
1E	Failure to assess and control the quality of contractors performing surveillance testing	IR 98005	Open
2	Corrective Action Program Breakdown		
2A	Failure to promptly identify and evaluate conditions adverse to quality	IR 98005	Open
2B	Inadequate corrective actions for previously identified conditions adverse to quality	IR 98004,5,9 and 97017 LERs 98010, 98017	Open
3	Programmatic Breakdown in the Maintenance of the Design Basis		
3A	Inadequate design control pertaining to uncontrolled and/or unintended changes in the plant design	IR 98004,5,7,9 and 97017	Open
3B	Failure to update the Final Safety Evaluation Report	IR 98005	Open
3C	Failure to consider instrument uncertainties, setpoints and/or instrument bias	IR 98009	Open
3D	Inadequate consideration for system/component failure modes	IR 98009	Open
4	Safety Evaluations		
4A	Failure to perform safety evaluations or safety evaluation screenings	IR 98004,7	Open
4B	Inadequate safety evaluations	IR 98004,9	Open
5	Operator Training Issues		
5A	Training staff ability to develop technically accurate examination material in accordance with examination guidelines was considered poor	IR 97305	Closed IR 98023
5B	Operator ability to determine the correct Protective Action Recommendations for the emergency event was in question	IR 97305	Closed IR 98023
5C	High failure rate for the operator examinations indicated that the applicants were not well prepared	IR 97305	Closed IR 98023
5D	Applicant abilities to communicate and diagnose events, during the dynamic simulator scenarios was considered weak	IR 97305	Closed IR 99016

ITEM NO.	DESCRIPTION	SOURCE DOCUMENTS	STATUS
	<u>SYSTEM SPECIFIC ISSUES</u>		
6	Resolution of Ice Condenser Issues	IR 98005 LERs 98004, 5,6,7,8,10,15,17, 24,25,26,32,35	Open
7	Resolution of Nonsafety-Related Cables Going to Shunt Trip Coils	LER 98016	Open
8	Resolution of Hydrogen Recombiner Operability Issues	IR 98007 LER 98009, 98019	Open
9	Resolution of Distributed Ignition Technical Specification Issue	IR 98007	Open
10	Resolution of Containment Spray System Operability Issues	LER 98022	Open
11	Resolution of Hydrogen Mitigation System Operability and Materiel Condition Issues	IR 98007 LER 98001	Open
12	Resolution of Containment Liner Pitting	LER 98011	Open
16	Resolution of operability of motor operated valves in the GL 89-10 Program	CR 98-2246, 3555 & 3920	Open
	<u>RESTART PLAN</u>		
13	Systems and Containment Readiness Assessments	Licensee's Restart Plan	Open
13A	Systems and Containment Problem Discovery	Licensee's Restart Plan	Closed IR 99002 IR 99003 IR 99006 IR 99007
13B	Systems and Containment Final Readiness Review	Licensee's Restart Plan	Open
14	Programmatic Readiness Assessments	Licensee's Restart Plan	Open
14A	Programmatic Problem Discovery	Licensee's Restart Plan	Closed IR 99013
14B	Contractor Control Program Ready for Restart	Licensee's Restart Plan	Open
14C	Preventative Maintenance Program Ready for Restart	Licensee's Restart Plan	Open
14D	Emergency Operating Procedures Program Ready for Restart	Licensee's Restart Plan	Open
14E	Electrical Protection Coordination including Fuse/Breaker Control Program Ready for Restart	Licensee's Restart Plan	Open
14F	Operability Determination Program Ready for Restart	Licensee's Restart Plan	Open

ITEM NO.	DESCRIPTION	SOURCE DOCUMENTS	STATUS
14G	Programmatic Final Readiness Reviews	Licensee's Restart Plan	Open
15	Functional Area Readiness Assessment	Licensee's Restart Plan	Open
15A	Functional Area Problem Discovery	Licensee's Restart Plan	Closed IR 99013
15B	Functional Area Final Readiness Reviews	Licensee's Restart Plan	Open

IR - Inspection Report  
 CR - Condition Report  
 GL - Generic Letter  
 LER - Licensee Event Report

## ENCLOSURE 2

### D.C. COOK 0350 GUIDELINES FOR RESTART APPROVAL

ITEM NUMBER	STATUS (Open/Closed)
<b>C.1.1 Root Cause Determination</b>	
b. Potential Root causes of the conditions requiring the shutdown and any associated problems were thoroughly evaluated.	Open
c. The scope of the analysis considered the applicability of related issues on similar systems, structures, components, procedures, processes, or activities at their own and other industry facilities in an attempt to identify trends or generic industry concerns.	Open
e. Rationale for rejecting potential root causes was clearly defined and documented for all root causes evaluated.	Open
f. The licensee's rationale for terminating the root cause and causal factors analyses was based on a documented process that provides a reasonable basis for all conclusions reached.	Open
g. The population of potential root causes and their respective evaluations have been independently reviewed by the licensee's oversight committee.	Open
<b>C.1.2. Corrective Action Development</b>	
a. The proposed corrective actions are clearly cross-referenced to all of the associated root causes and causal factors they are intended to correct, as appropriate.	Open
b. Each of the corrective actions is assigned an appropriate priority based on safety significance to ensure the proper resources and attention are devoted.	Open
c. Proposed corrective actions identify the desired conditions to be achieved and are adequate to preclude repetition.	Open
d. Corrective actions are sufficiently detailed to ensure that all activities related to completion of the corrective action have been identified (i.e., procedure or drawing changes, Technical Specification changes, etc.).	Open
e. Corrective actions include restoring systems and equipment to service and verifying they can perform their intended safety functions through post-maintenance or post-modification testing.	Open
f. The licensee performed safety evaluations to ensure that corrective actions (e.g., procedure changes or modifications) did not result in a loss of safety margin.	Open
g. The licensee adhered to applicable industry codes and standards during the development and analysis of corrective actions.	Open
h. The licensee expanded the scope of the corrective actions to consider all of the causal factors that contributed to the deficiency or problem, including potential generic concerns.	Open

	ITEM NUMBER	STATUS (Open/Closed)
i.	Development of the corrective actions included insights from the organizations or individuals that may have contributed to the event, those responsible for developing the corrective actions, and those responsible for implementing the corrective actions.	Open
j.	Interim corrective actions have been developed and documented when permanent corrective action will take an excessive amount of time to implement or cannot be completed before the licensee plans to restart the facility.	Open
k.	All corrective actions have been incorporated into a comprehensive corrective action plan, which has been approved by the licensee's independent oversight committee.	Open

### **C.1.3 Corrective Action Plan Implementation and Effectiveness**

a.	Each of the corrective actions is assigned a required start and completion date commensurate with the complexity and safety significance of the action.	Open
b.	An organization and individual have been designated with lead responsibility for each of the corrective actions.	Open
c.	The responsible individual has sufficient authority, resources, and management support to ensure the action will be adequately completed.	Open
d.	The licensee has defined objectives to be achieved from implementing the corrective action plan, including interim objectives to assess the progress of the plan. The objectives are focused on ensuring a lasting improvement in the operation and maintenance of the plant.	Open
e.	Whenever possible, the licensee's objectives are based on a measurable set of criteria that the licensee can readily track and trend, as appropriate, to provide continuous monitoring of the implementation and effectiveness of the corrective action plan. These measures should form the acceptance criteria for closure and provide precursor indication of declining performance.	Open
f.	The licensee has anticipated and addressed potential conflicts of implementing the corrective action plan with existing facility operational (maintenance, engineering, etc.) practices, regulatory requirements, or personnel activities.	Open
g.	The corrective action plan contains guidance for the licensee to assess changing information or conditions to determine whether the licensee must modify the corrective action plan.	Open
h.	The licensee has developed training on both the lessons learned from the event analysis and root cause determination and the technical and administrative changes made to the facilities or practices that includes a discussion regarding why the changes are necessary.	Open

ITEM NUMBER	STATUS (Open/Closed)
i. The corrective action plan includes requirements to have self-assessments, and as necessary independent assessments, of the implementation and effectiveness of the plan.	Open
j. In cases where long term actions remain to be accomplished, the licensee has clearly documented when the action will be complete, the basis for the delay in completing the actions, and how the action will be tracked and trended to ensure completion.	Open
k. The licensee has established a predefined time frame following completion of the corrective actions during which they will continue to monitor the effectiveness of the corrective actions.	Open

#### **C.2.1. Self-Assessment Capability**

a. Effectiveness of Quality Assurance Program.	Open
c. Effectiveness of licensee's Independent Review Groups.	Open
d. Effectiveness of deficiency reporting system.	Open

#### **C.3.1. Assessment of Staff**

a. Demonstrated commitment to achieving improved performance through the results of the programmatic readiness assessment.	Open
d. Understanding of plant issues and corrective actions.	Open

#### **C.3.2 Assessment of Corporate Support**

a. Demonstrated commitment to achieving improved performance through the results of the programmatic readiness assessment.	Open
e. Effectiveness of corporate engineering support.	Open
f. Effectiveness of corporate design modification process.	Open
g. Effectiveness of licensing support.	Open

#### **C.3.3 Operator Issues**

d. Effectiveness of restart simulator/required training necessary to re-familiarize personnel with operating conditions.	Open
e. Assessment of plant staff performance during restart. Sustained control room observations by NRC personnel.	Open

#### **C.4 Assessment of Physical Readiness of the Plant**

ITEM NUMBER		STATUS (Open/Closed)
a.	Operability of Technical Specification systems, specifically those with identified operational, design, and maintenance issues.	Open
b.	Operability of required secondary and support systems.	Open
c.	Results of pre-startup testing.	Open
d.	Adequacy of system lineups.	Open
e.	Adequacy of surveillance tests/test program.	Open
f.	Significant hardware issues resolved (i.e., equipment with poor material condition, equipment aging, modifications).	Open
g.	Adequacy of the power ascension testing program.	Open
h.	Effectiveness of the plant maintenance program.	Open
i.	Maintenance backlog managed and impact on operation assessed.	Open
j.	Adequacy of plant housekeeping and equipment storage.	Open

#### **C.5 Assessment of Compliance with Regulatory Requirements**

a.	Applicable license amendments have been issued.	Open
b.	Applicable exemptions have been granted.	Open
c.	Applicable reliefs have been granted.	Open
d.	Imposed Orders have been modified or rescinded.	Open
e.	Confirmatory Action Letter conditions have been satisfied.	Open
f.	Significant enforcement issues have been resolved.	Open
g.	Allegations have been appropriately addressed.	Open
h.	10 CFR 2.206 Petitions have been appropriately addressed.	Open

#### **C.6 Coordination With Interested Agencies and Parties**

e.	Appropriate State and local Officials	Open
f.	Appropriate public interest groups	Open
g.	Local news media	Open